

1. (Three Times Amended) A multi-chamber system of an etching facility for manufacturing semiconductor devices comprising:

a cassette stage for mounting a cassette having wafers stacked thereon;

a transfer path adjacent to the cassette stage for providing space for transportation of wafers, the transfer path being at atmospheric pressure;

a plurality of processing chambers aligned with the transfer path;

F1 a transfer mechanism installed in the transfer path for loading and unloading the wafers stacked on the cassette stage; and

at least one load lock chamber, each said load lock chamber being directly connected to at one side of at least one of the processing chambers and serving as a stand-by area for the wafers.

F2 13. (Amended) The multi-chamber system of an etching facility for manufacturing semiconductor devices according to claim 11, wherein the transfer arm is provided with a vacuum line so as to vacuum-suction the wafers.

F3 16. (Amended) The multi-chamber system of an etching facility for manufacturing semiconductor devices according to claim 12, wherein the vertical driving part comprises a motor or a pneumatic cylinder.

F4 20. (Four Time Amended) A multi-chamber system of an etching facility for manufacturing semiconductor devices comprising:

a cassette stage for mounting a cassette having wafers stacked thereon;
a transfer path adjacent to the cassette stage for providing space for transportation of wafers, the transfer path being at atmospheric pressure and having a width slightly larger than a diameter of the wafers;
a plurality of processing chambers aligned in a plurality of layers parallel to and adjoining the transfer path;
a transfer mechanism capable of vertical/horizontal reciprocal movement installed in the transfer path for loading and unloading the wafers stacked on the cassette stage; and
a load lock chamber directly connected to one side of the processing chambers, the load lock chamber serving as a stand-by area for the wafers.

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~~26~~ The multi-chamber system of an etching facility for manufacturing semiconductor devices according to claim ~~28~~²⁹, wherein the transfer mechanism comprises:

a transfer arm having a vacuum line so as to selectively vacuum-suction the wafers;
a transfer robot for loading and unloading the wafers into the processing chamber by moving the transfer arm;
a vertical driving part for moving the transfer robot vertically;
a horizontal driving part for moving the transfer robot horizontally; and

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F₅ a controller for controlling the transfer robot, the vertical driving part, and the horizontal driving part by applying control signals thereto.

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31. (Three Times Amended) A multi-chamber system of an etching facility for manufacturing semiconductor devices comprising:

a first cassette stage for mounting a cassette having unprocessed wafers stacked thereon;

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F₄ a transfer path adjacent to the first cassette stage that provides space for transportation of wafers, the transfer path being at atmospheric pressure and having a width slightly larger than a diameter of the wafers;

a plurality of processing chambers arranged in multi-layers and aligned in parallel adjoining the transfer path;

a transfer mechanism capable of vertical/horizontal reciprocal movement installed in the transfer path for loading and unloading the wafers stacked on the first cassette stage; and

a second cassette stage placed opposite to the first cassette stage and mounting thereon a cassette having processed wafers stacked thereon.

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32. (Amended) The multi-chamber system of an etching facility for manufacturing semiconductor devices according to claim 31 wherein the transfer mechanism comprises:

a transfer arm having a vacuum line for selectively vacuum-suctioning wafers;
 a transfer robot for loading and unloading wafers to the processing chambers
 by moving the transfer arm;
 a vertical driving part for vertically moving the transfer robot;
 a horizontal driving part for horizontally moving the transfer robot; and
 a controller for controlling the transfer robot, the vertical driving part, and the
 horizontal driving part by applying control signals thereto.

REMARKS

Reexamination and reconsideration of the present application are requested.
 Applicants have amended claims 1, 13, 16, 20, 26, 31 and 32. Accordingly,
 claims 1-3, 5-23 and 24-32 remain pending in the application.

35 U.S.C. § 112

The Examiner rejected claims 13, 16, 26, and 32 under 35 U.S.C. § 112,
 second paragraph, as allegedly being indefinite. Applicants have amended claim 16
 to correct a typographical error in the dependency of the claim as originally filed.
 Applicants respectfully note that the newly-raised contention that "vacuum-absorb" is
 somehow indefinite was not raised in any of the four previous Office Actions in this
 case dating back over almost two years. Nevertheless, claims 13, 26, and 32 have
 been amended in deference to the Examiner.